

Unit 10 - Week 8 :

Course outline

How does an NPTEL online course work?

Week 0

Week 1 :

Week 2 :

Week 3 :

Week 4 :

Week 5 :

Week 6 :

Week 7 :

Week 8 :

Lecture 37 : Concepts of Soft Computing and Expert Systems

Lecture 38 : Concepts of Soft Computing and Expert Systems (Contd.)

Lecture 39 : A Few Applications

Lecture 40 : A Few Applications (Contd.)

Lecture 41 : A Few Applications (Contd.)

Lecture 42 : A Few Applications (Contd.)

Lecture Material

Quiz : Assignment 8

Week 8 Feedback Form

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Assignment Detailed Solution

Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-04-22, 23:59 IST.

1) Hard computing works based on

2 points

- principle of nature-inspired techniques.
- principles of pure mathematics.
- Combination of both nature-inspired techniques and principle of pure mathematics.
- None of the above.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

2) Soft computing works based on

2 points

- principle of nature-inspired techniques.
- principles of pure mathematics.
- both nature-inspired techniques and principle of pure mathematics.
- None of the above.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

3) To model a complex real-world problem, which one is more suitable to use, in general?

2 points

- Hard computing
- Soft computing
- Either hard computing or soft computing
- Neither hard computing nor soft computing

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

4) The term: soft computing was introduced by

2 points

- Prof. John Holland
- Prof. D. E. Goldberg
- Prof. L. A. Zadeh
- Prof. William Smith

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

5) Which one is not a member of soft computing family?

2 points

- Genetic Algorithm (GA)
- Statistical regression analysis
- Fuzzy logic
- Neural network

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

6) Stress analysis of a mechanical member mathematically can be an example of

2 points

- Hard computing.
- Soft computing.
- Both hard computing and soft computing.
- Neither hard computing nor soft computing.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

7) Design and development of adaptive motion planners for intelligent and autonomous robots can be an example of

2 points

- Hard computing.
- Soft computing.
- Both hard computing and soft computing.
- Neither hard computing nor soft computing.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

b.

8) If we want to obtain the precise or exact solution of a simple problem, which one is preferable?

2 points

- Hard computing
- Soft computing
- Either hard computing or soft computing
- Neither hard computing nor soft computing

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

a.

9) If we want to model fuzziness and uncertainties of a problem, which one of the following tools will be recommended?

2 points

- Back-propagation neural network
- Statistical regression analysis
- Fuzzy reasoning tool with Mamdani approach
- Counter-propagation neural network

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.

10) Fuzzy Proportional Integral and Derivative (fuzzy-PID) controller used to control DC motors is an example of

2 points

- hard computing.
- soft computing.
- hybrid computing.
- none of the above.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

c.